

Notice of Allowability

Application No.

09/450,381

Examiner

Charles E. Anya

Applicant(s)

SHAH ET AL.

Art Unit

2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant's remarks/argument of 7/5/05.
2. ☒ The allowed claim(s) is/are 1,4-25 and 27-30; now renumbered as 1-27.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☒ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 3/7/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 9/9/05.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.


MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Mr. Robert Anderson (Reg. No. 33,826) on 9/8/05.

In the claims:

- a. Replace Claim 1 as follows;
 - A host comprising:
 - a processor;
 - a memory coupled to the processor;
 - an operating system provided with an I/O bus abstraction to report multiple path via a cluster fabric to a target fabric-attached I/O controller that may be shared between the host and another host via the cluster fabric, the operating system to direct service requests between the host and the target fabric-attached I/O controller in response to the multiple paths; wherein the operating system further comprises:
 - a kernel;
 - a fabric bus driver to provide said I/O bus abstraction to the kernel for the cluster fabric to report the multiple paths to the target fabric-attached I/O controller;

and said fabric bus driver presents the cluster fabric to the kernel as a local I/O bus, and presents one or more target fabric-attached I/O controllers to the kernel as local I/O controller.

b. Cancel claims 2 and 3;

c. Rewrite claim 21 as follows:

A computer usable medium having computer readable program code embodied therein for use in a host system to report multiple paths via a cluster fabric to a target fabric-attached I/O controller, said computer program code when executed, cause a computer to:

create and report multiple paths from the host via the cluster fabric to the target fabric-attached I/O controller that may be shared between the host and another host via the cluster fabric;

enable reporting the multiple paths to the target fabric-attached I/O controller;

direct service requests between the host and the target fabric-attached I/O controller in response to the multiple paths;

present the cluster fabric to a kernel as local I/O bus; and

present one or more target fabric-attached I/O controllers to the kernel as local I/O controllers.

d. Rewrite claim 25 as follows:

A method of initializing a host to report multiple paths via a cluster fabric to a target fabric-attached I/O device comprising:

loading an operating system (OS) into a memory;

identifying all fabric-attached I/O devices assigned to the host, wherein the fabric-attached I/O devices may be shared between the host and another host via the cluster fabric;

reporting the identified fabric-attached I/O devices;

creating and reporting multiple paths via the cluster fabric to the target fabric-attached I/O device that may be shared between the host and another host via the cluster fabric;

directing service requests between the host and the target fabric-attached I/O device in response to the multiple paths; and

the identified fabric-attached I/O devices are reported, via a fabric bus driver included in the operating system (OS) to provide a local I/O bus abstraction for the cluster fabric into the memory, using a common set of procedures or commands.

e. Cancel claim 26.

f. Claim 27:

- line 1, replace "claim 26" with – claim 25 --;

g. Claim 28:

- line 1, replace "claim 26" with – claim 25 --;

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Anya whose telephone number is (571) 272-3757. The examiner can normally be reached on M-F (8:30-6:00) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, An Meng-Ai can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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